

# ★ LAS VEGAS ★

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### 2025

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# Power BI Adhoc Beginner

Your Guides:  
Robert Newell & Lulu Wang

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# Part I: Introduction

# Course Outline



## Overview

- What is Power BI
- Power BI Components
- Data Flow



## Creating a Report

- Power BI Desktop Navigation
- Creating a Simple Report Using Power BI Application
- Examples of Using Custom Visuals



## Data Transformation - Advanced

- Creating your own M script for your next advanced report
- M Script Examples



## Connecting to Data Sources

- Power BI Service Navigation
- Options to Connect to Sources
- Creating a Data Connection



## Data Import Options

- Connecting to ODATA and Oracle Server and Extracting Data
- Direct Query vs. Import



## Paginated Reporting

- Presentation Level Reports
- Integration Use Case **regoXchange**



## Reports and Dashboards

- Dashboard Components
- Options to Share Reports and Dashboards



## Data Transformation

- Data Transformation Components
- Data Modeling

# Session Goal and Objectives

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**Course Goal:** To provide an overview of Power BI functionality in conjunction with Clarity by Broadcom data.

**Course Objectives:** You will learn how to:

- Understand how Power BI works with Clarity data
- Connect to data sources
- Create reports and dashboards
- Create and modify M scripts



# Overview

- What is Power BI
- Power BI Components
- Data Flow

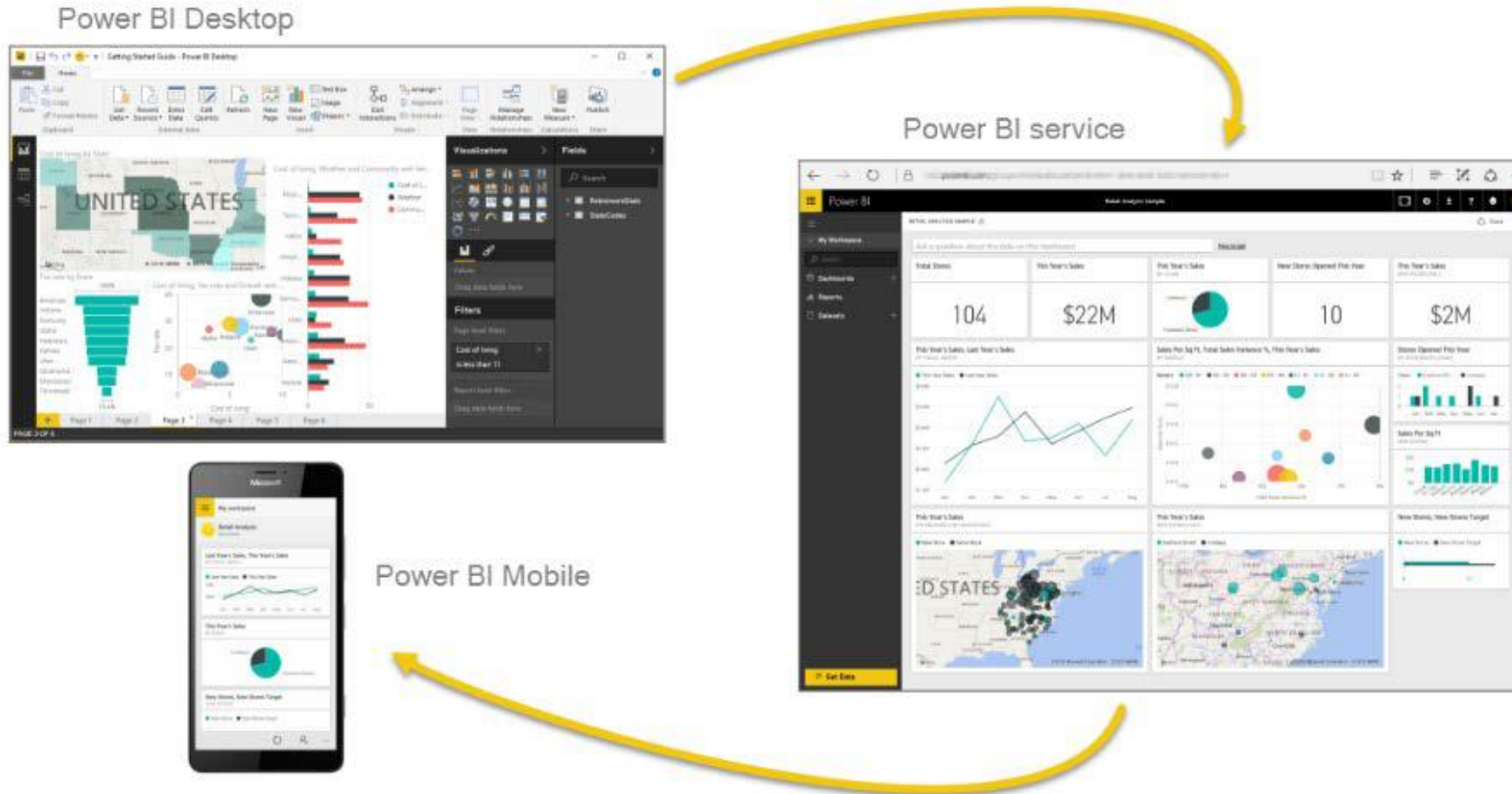
# What is Power BI?

Power BI is a dashboard tool from Microsoft that lets you connect to variety of data sources and create visually stunning and interactive dashboards.

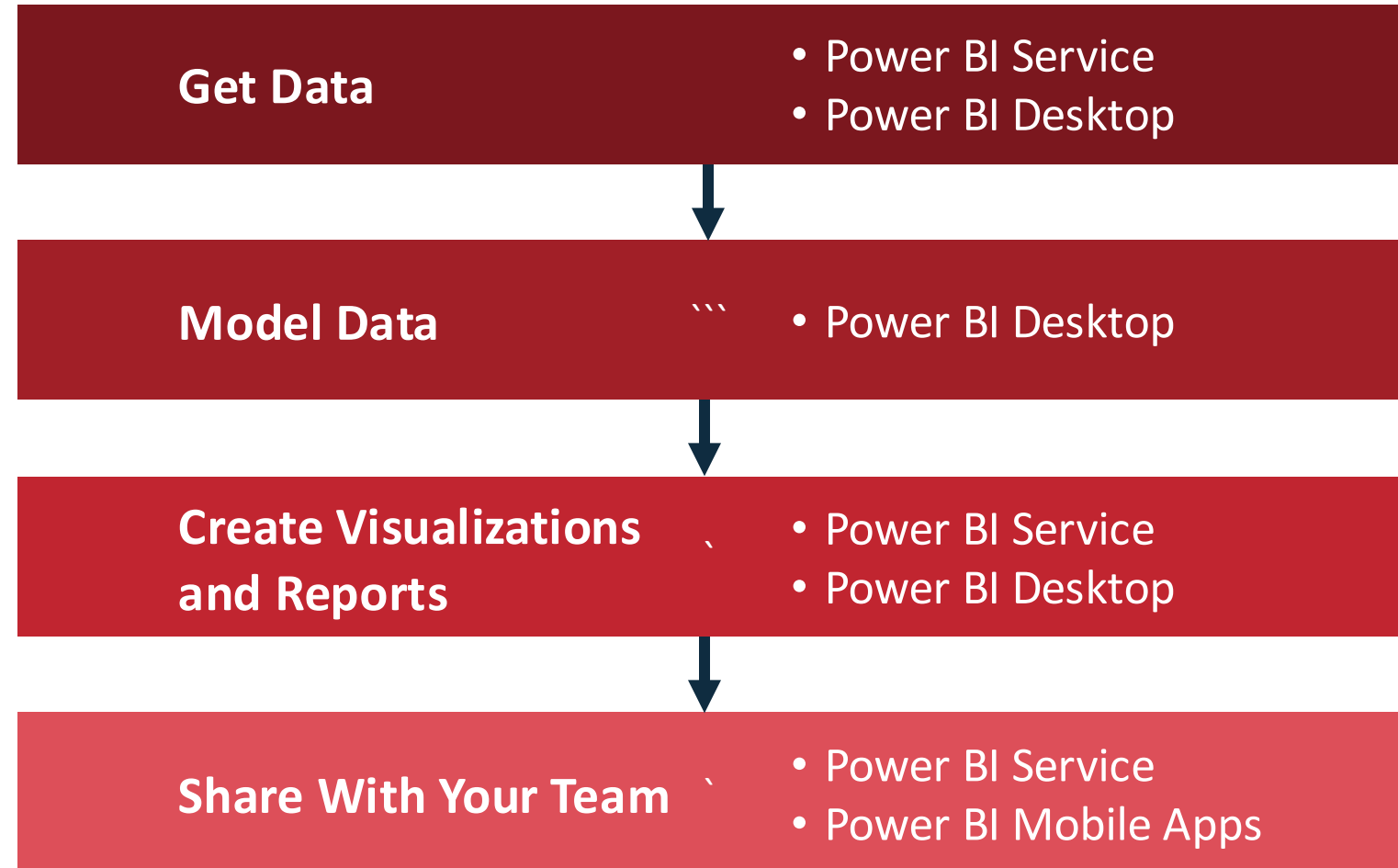


# Power BI Components

Power BI has 3 main components:



## Development Approach





# Power BI Service

- Power BI Service Navigation
- Options to Connect to Sources
- Creating a Data Connection

# Power BI Service Navigation

The screenshot shows the Power BI Service interface for a workspace named 'My workspace'. The top navigation bar includes a search bar and icons for notifications, settings, download, help, and a user profile. The left sidebar contains navigation links: Home, Create, Browse, OneLake data hub, Apps, Metrics, Monitor, Learn, Real-Time hub, Workspaces, and My workspace. The main content area features a 'Build your first report' section with three steps: 'Add and prepare your data', 'Generate a premade report', and 'Customize to suit your needs'. Below this is a section titled 'Add data to start building a report' with four options: 'Excel (Preview)', 'CSV (Preview)', 'Paste or manually enter data', and 'Pick a published semantic model'. A link to 'Download the desktop app.' is provided. At the bottom, there is a section 'Other items you can create with Microsoft Fabric' showing 'Lakehouse', 'Warehouse', and 'Notebook' options, each with a brief description.

**Power BI** My workspace

Search

**Build your first report**

- Add and prepare your data
- Generate a premade report
- Customize to suit your needs

**Add data to start building a report**

- Excel (Preview)
- CSV (Preview)
- Paste or manually enter data
- Pick a published semantic model

Don't see the source you're looking for? [Download the desktop app.](#)

**Other items you can create with Microsoft Fabric** [See all](#)

Current workspace: **My workspace**  
Items will be saved to this workspace.

- Lakehouse**  
Store big data for cleaning, querying, reporting, and sharing.
- Warehouse**  
Provide strategic insights from multiple sources into your entire business.
- Notebook**  
Explore data and build machine learning solutions with Apache Spark applications.

# Menu Links



Home

→ **Home:** Default landing page when you log in to the Power BI service. It's a great starting point for viewing and navigating your content.



Create

→ **Create:** This is where you can start creating new content. You can create reports, dashboards, and more. The options available depend on your license.



Browse

→ **Browse:** This is a new navigation tab that provides sub-navigation for lists that were previously available individually. On this page, you can access the Recent, Favorites, and Shared with me lists.



Data hub

→ **Data Hub:** This hub helps you find, explore, and use data items in your organization, such as datasets, datamarts, and their related reports.

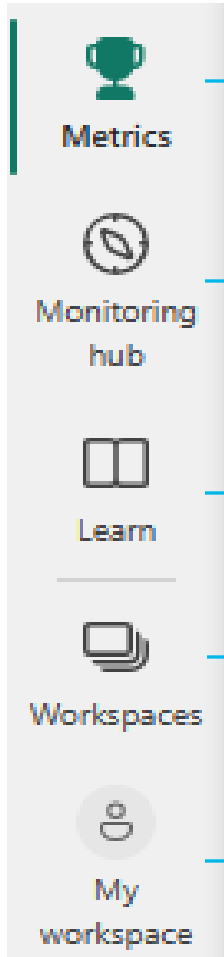


Apps

→ **Apps:** This is where all apps that have been shared with you, or that you've installed, are stored. You can go directly to your apps by selecting Apps on the navigation pane.



# Menu Links



**Metrics:** Provides a way to curate and track key business objectives. This promotes accountability, alignment, and visibility within organizations.

**Monitoring Hub:** This hub enables users to monitor various Microsoft Fabric activities, such as dataset refresh, Spark Job runs, and many others from a central location.

**Learn:** This is where you can find learning resources and tutorials about Power BI.

**Workspaces:** This is where you can collaborate on Power BI content with your colleagues. You can also publish finished apps to large groups of people in your organization.

**My Workspace:** This is your private sandbox for learning and experimenting. Only you can see your workspace.

# Metrics

The metrics section of Power BI service can be a powerful tool for project and portfolio management reporting when used with data provided by Clarity. Here are some potential use cases:



**Track Key Business Objectives:** Metrics in Power BI allow customers to curate their metrics and track them against key business objectives. This can be particularly useful in project and portfolio management where you might want to track objectives such as project completion rates, resource utilization, or budget adherence.



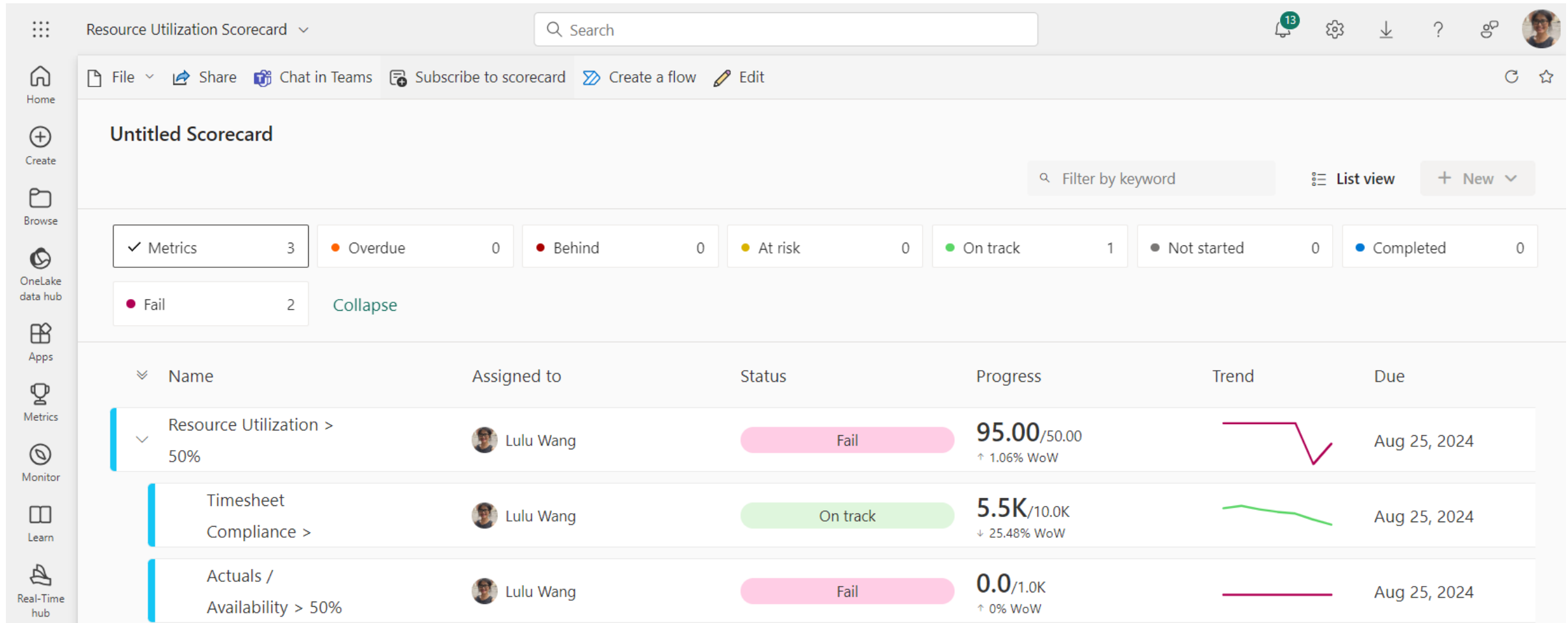
**Promote Accountability and Visibility:** The metrics features enhance data culture by promoting accountability, alignment, and visibility for teams and initiatives within organizations. For instance, you can create scorecards for different projects or teams and monitor their progress in real time.



**Hierarchical Views:** Power BI supports cascading scorecards that roll up along hierarchies set up in your scorecard. This can be useful for viewing data at different levels of your organization or project structure. For example, you might have a hierarchy based on project stages or OBS units.

# Example Metrics

14

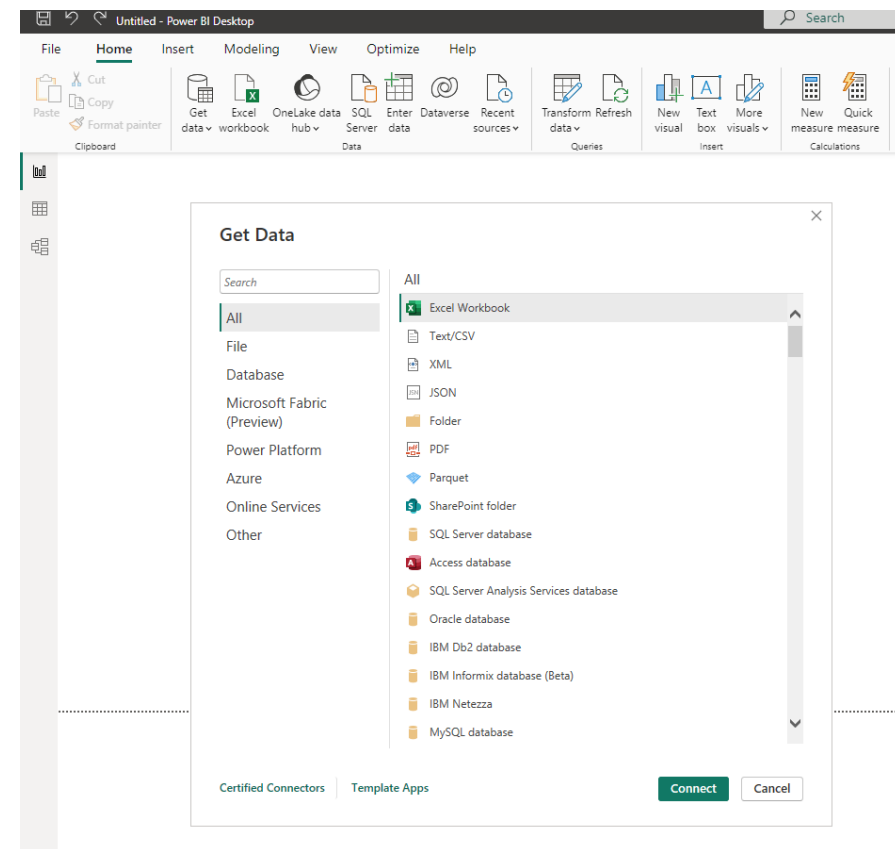
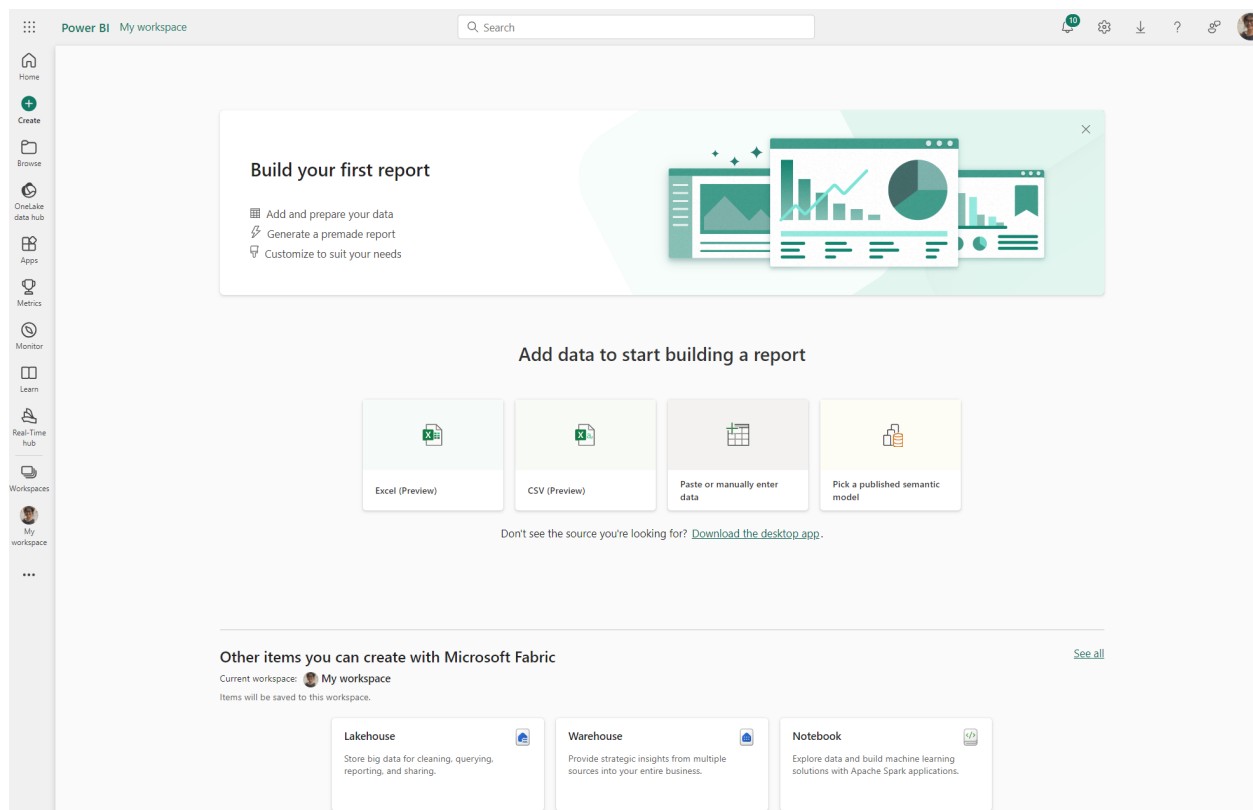




# Connecting to Data Sources

- Power BI Service Navigation
- Options to Connect to Sources
- Creating a Data Connection

# Connecting to Data Sources





# Reports and Dashboards

- Dashboard Components
- Options to Share Reports and Dashboards

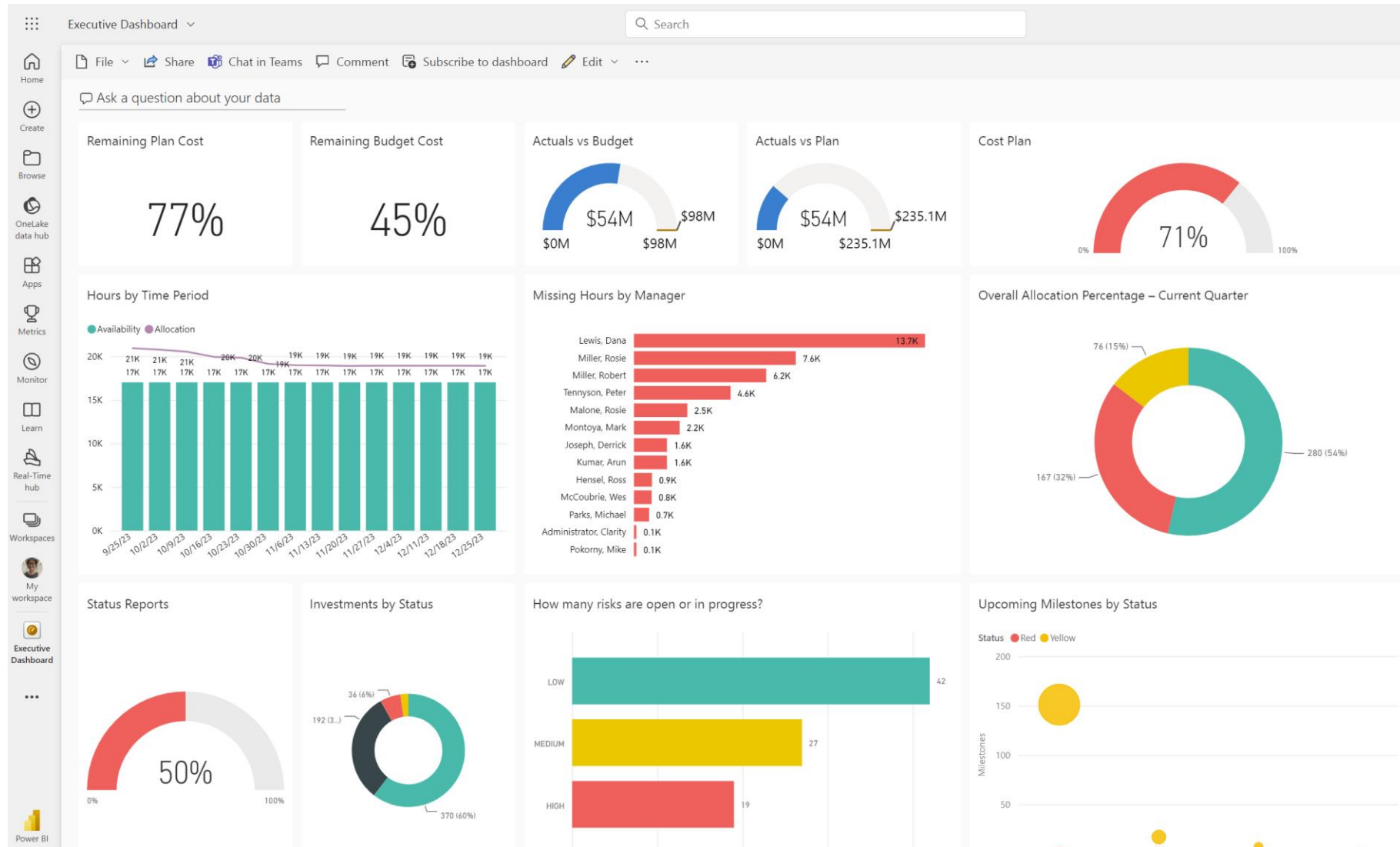


# Reports and Dashboards

## Dashboard Components

-  Dashboards are high-level views of key KPIs from one or more reports. Reports are pinned to a live page which then adds that data to a new or existing dashboard.
-  A dashboard can include an entire report page individual visualizations from multiple reports.

# Dashboard Example



# Sharing Reports and Dashboards

## Options to Share Reports and Dashboards:

- ✓ Publish reports to the web
- ✓ Share dashboards
- ✓ Duplicate and modify shared dashboards (personal versions)
- ✓ Export to multiple formats
- ✓ Print
- ✓ QR code



# Sharing Reports and Dashboards



Share Reports  
and Dashboards



Workspace  
Collaboration



Share via Link



Share from  
Power BI Mobile  
Apps



Share from Power BI Desktop  
with OneDrive and SharePoint  
Integration

# Licensing

Scenario	Creator	Consumer
✓ You create a report in Power BI Desktop (.PBIX). Then you publish it to your My Workspace on the Power BI service.	✓ As a creator, you only need the free Desktop app and a free Power BI license to publish to your My Workspace in the Power BI service for your own use. A paid Power BI Pro or PPU license is required to share content in My Workspace with others.	✓ Consumers can't see content in other people's My Workspace unless the owners decide to share. To see shared My Workspace content requires a paid license.
✓ You create a report in Power BI Desktop (.PBIX) and share the .PBIX file to other people who open the file in Power BI Desktop	✓ No licensing needed, only the Power BI Desktop app to be downloaded and installed.	✓ No licensing needed, only the Power BI Desktop app to be downloaded and installed.
✓ You create a report in Power BI Desktop (.PBIX) and publish it to a shared workspace in the Power BI service.	✓ Paid license needed to publish to shared workspaces.	✓ A paid license is required to view the content unless the workspace is hosted in Premium capacity. With Premium, the consumer only needs a free license to view that report.
✓ You're sent a link to a report hosted on the Power BI service and want to view it.	✓ You need a paid license to share a link. You need a free license to share a link to a report that is in Premium capacity.	✓ A paid license is required to view the report unless the report is hosted in Premium capacity. With Premium, the consumer only needs a free license to view that report.

# Reports and Dashboards

## Steps to Share



### **Publish to Web**

- Do not use this option as it will allow access to dashboard to public



### **Share**

- Grant/Revoke access to colleagues in the organization
- It will warn you if you have entered an email address outside the organization



### **Create Workspaces (Pro only)**

- Public or Private groups
- Edit or View only groups



### **Create Apps (Pro Only)**

- Entire Organization
- Specific Individual or Groups



# Data Import Options

- Direct Query vs. Import
- Connecting to ODATA and Oracle Server and Extracting Data

# Data Import Options

Connecting to ODATA and Oracle Server and Extracting Data

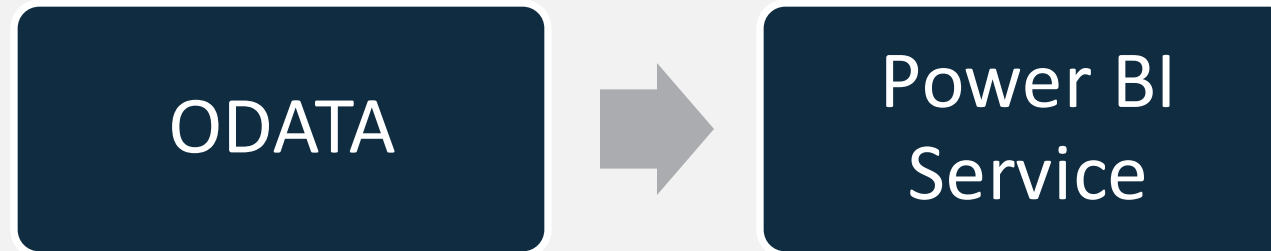
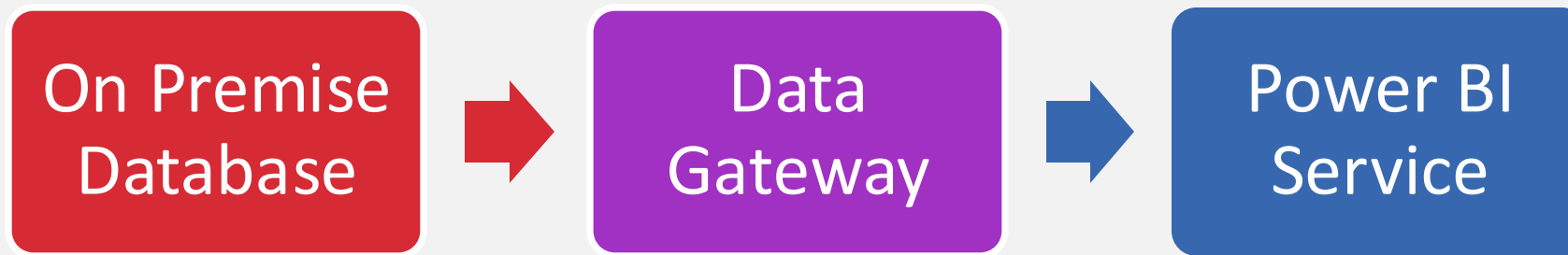


**OData Feed**



**Oracle database**

# Data Refresh – On Premise vs On Demand Clarity





# Connecting to Odata Feed

Here are the steps to create a dashboard:

- ✓ Open your Power BI Desktop instance
- ✓ Select OData feed option under GetData
- ✓ Enter the Odata URL provided by your admin and click on OK
- ✓ Enter the username & password and click on Connect to authenticate
- ✓ Odata Table Navigator opens. Select the tables required for your dashboard and click on Load

Navigator

Display Options

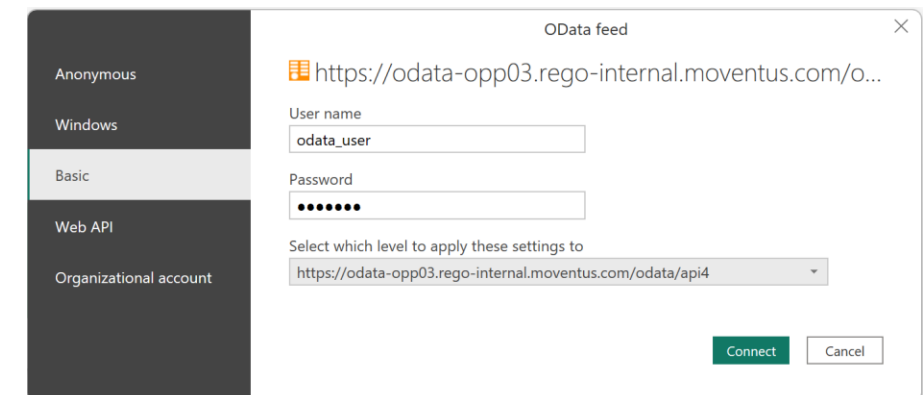
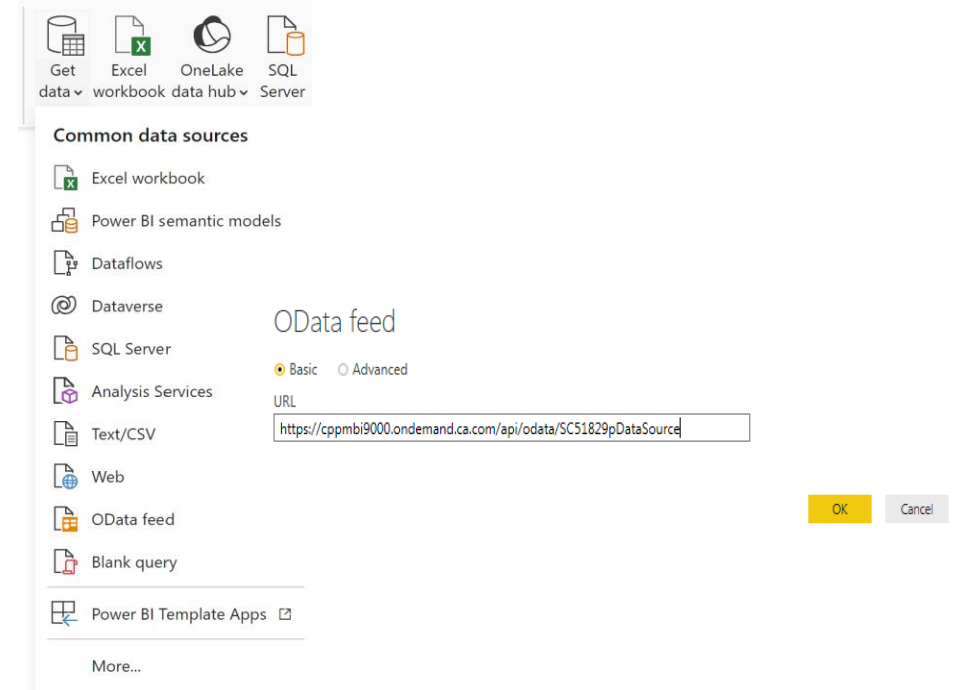
- ☒ DWH\_INV\_INVESTMENT
- ☐ DWH\_INV\_INVESTMENT\_LN
- ☐ DWH\_INV\_OBS\_MAPPING
- ☐ DWH\_INV\_OTHER\_WORK
- ☐ DWH\_INV\_OTHER\_WORK\_LN
- ☐ DWH\_INV\_PER\_FACTS\_F\_V

DWH\_INV\_INVESTMENT  
Preview downloaded on Wednesday

INVESTMENT_KEY	CLARITY_INVESTMENT_KEY	INVESTMENT_ID	INVESTMENT_NAME
5006027	5006027	IDA00275	Annual Benefit Changes I
5006029	5006029	IDA00277	Annual PPO Network Che
5006030	5006030	IDA00279	Medicare Advantage Plar
5006032	5006032	IDA00307	New HRA vendor

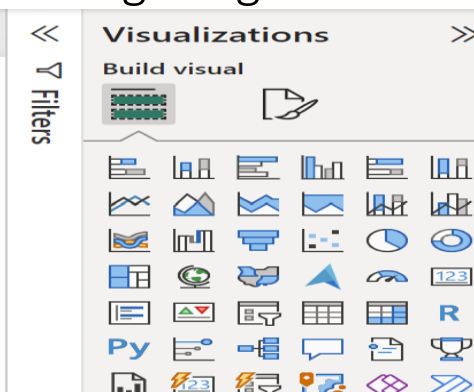
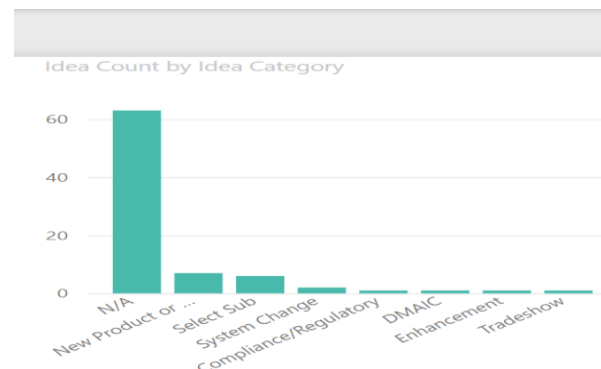
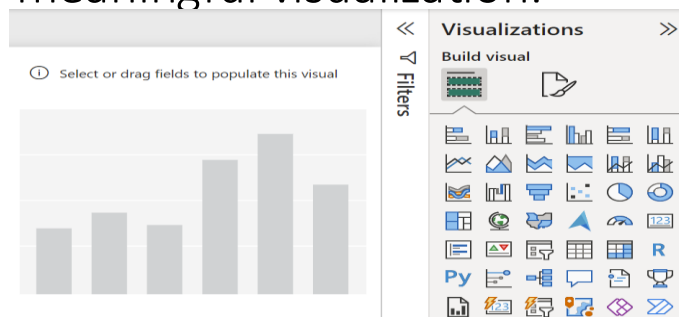
*The data in the preview has been truncated due to size limits.*

- ✓ Selected Tables are loaded, and Power BI canvas opens up



# Connecting to Odata Feed

- ✓ Select the required visualization and drag the fields from the tables on to the settings to generate a meaningful visualization.



- ✓ You can group related visualizations under a single dashboard. Save the dashboard after completion.



# Data Import Options

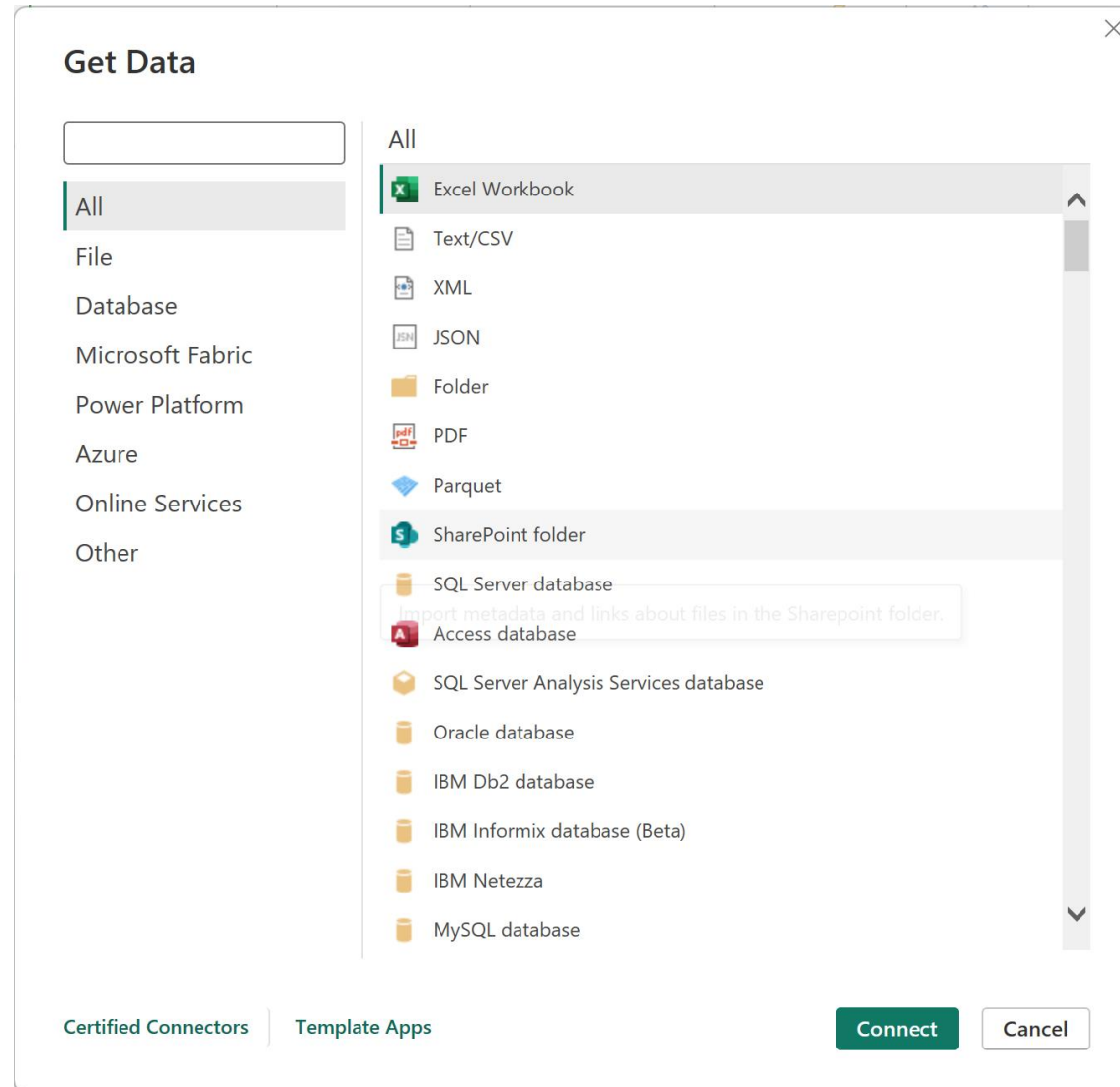
## Direct Query vs. Import [Oracle]

Data Connectivity mode ⓘ

- ☒ Import
- ☐ DirectQuery

# Data Import Options

## Connecting to a Source

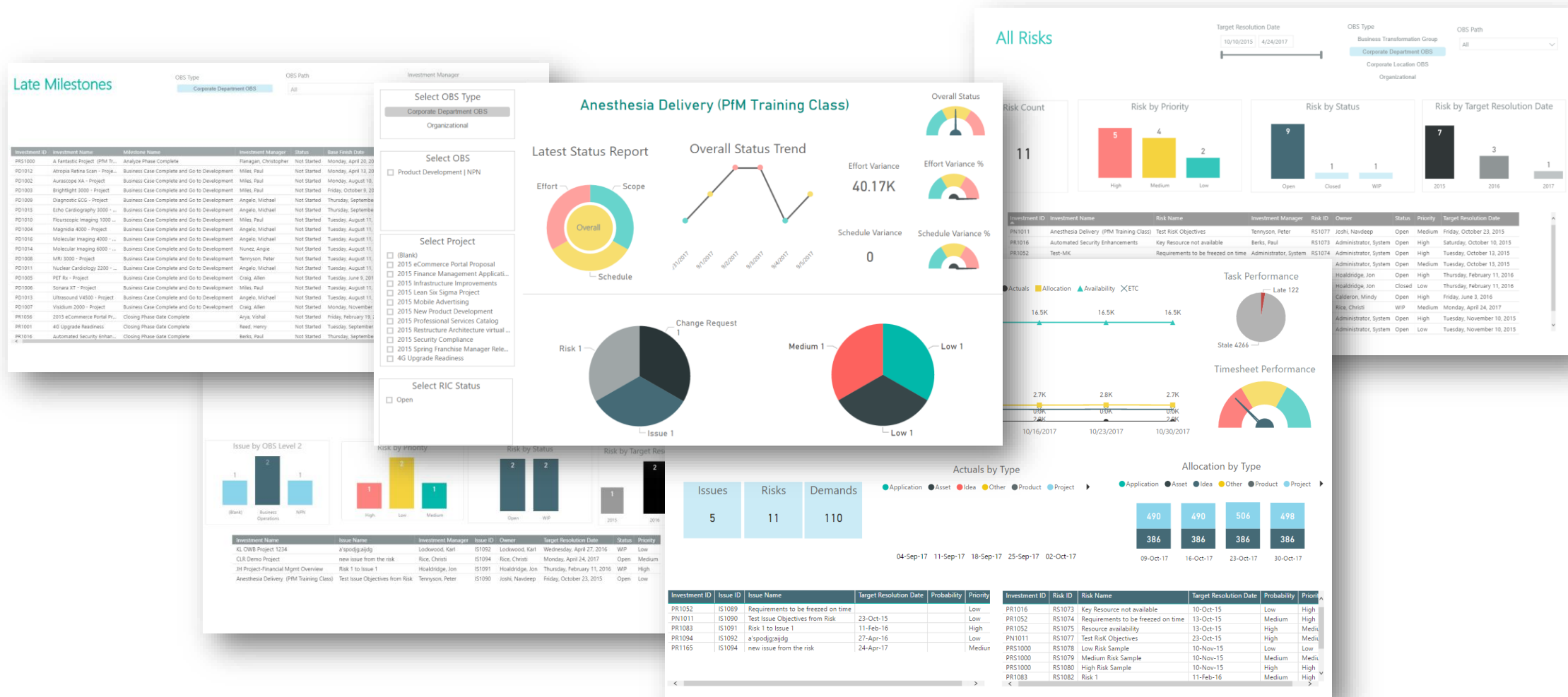




# Creating a Report

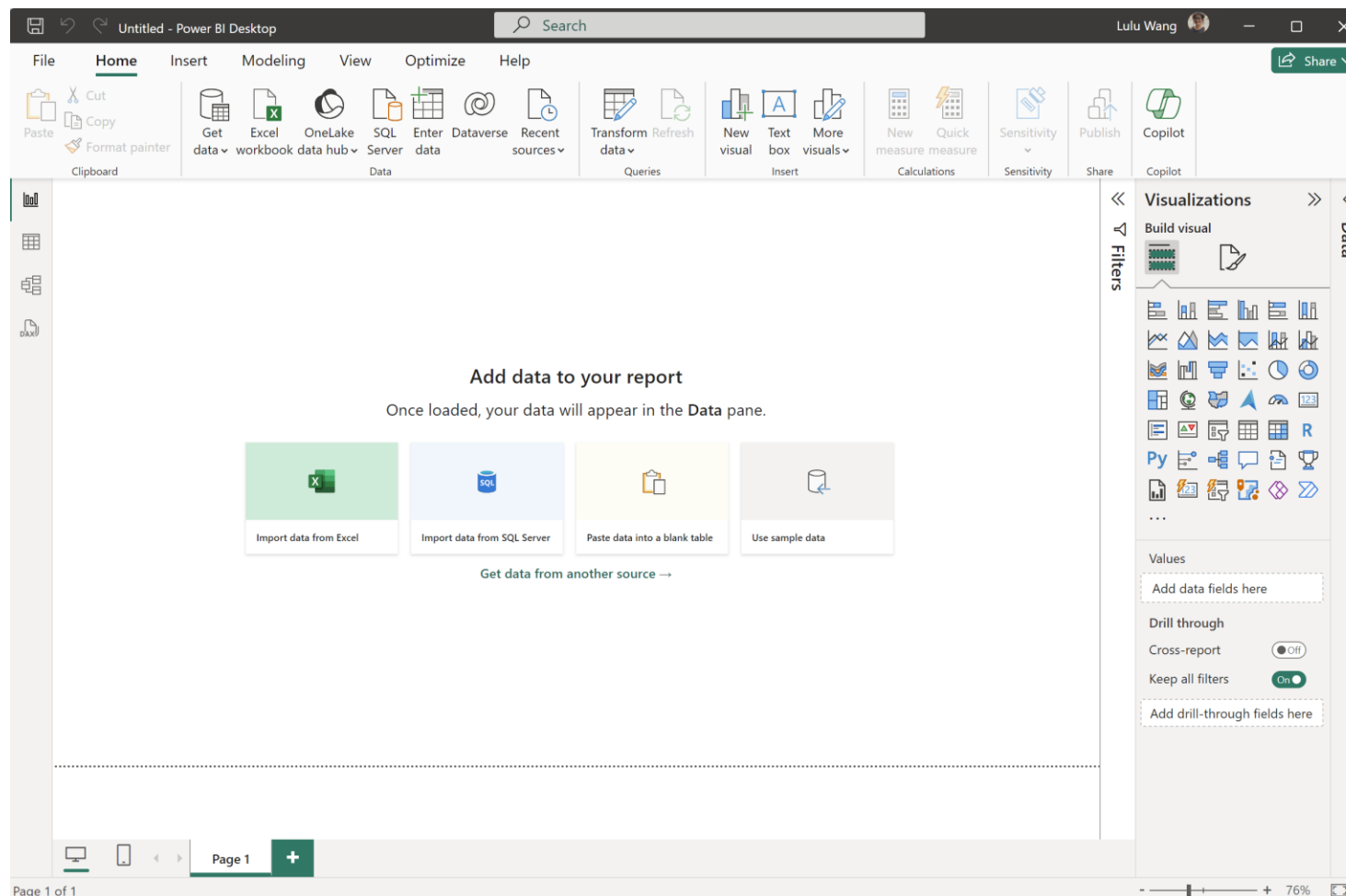
- Power BI Desktop Navigation
- Creating a Simple Report Using Power BI Application
- Examples of Using Custom Visuals

# Creating a Report



# Creating a Report

## Power BI Desktop Navigation

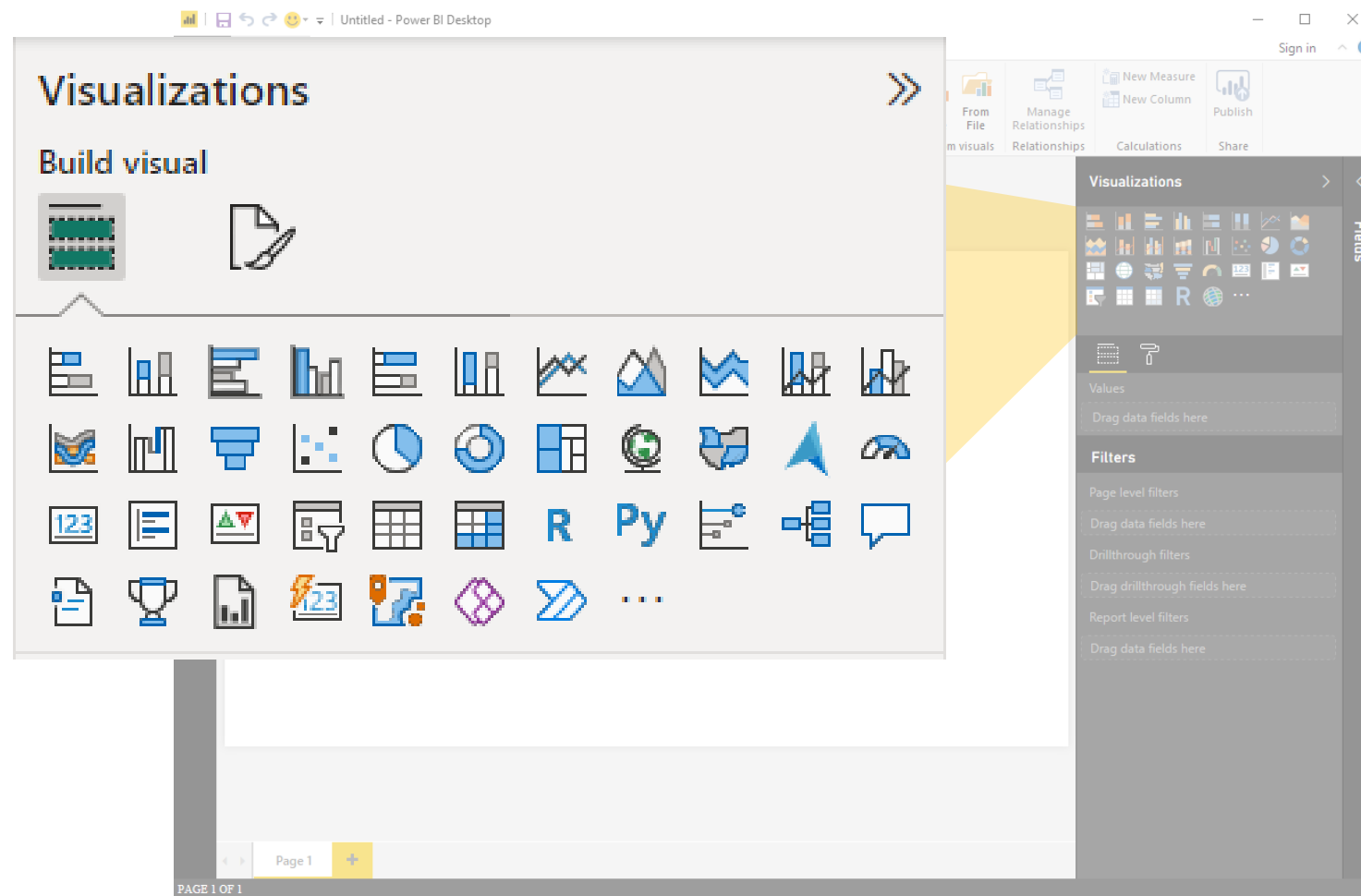


# Reports and Dashboards

## Dashboard Components

### Chart Visualizations

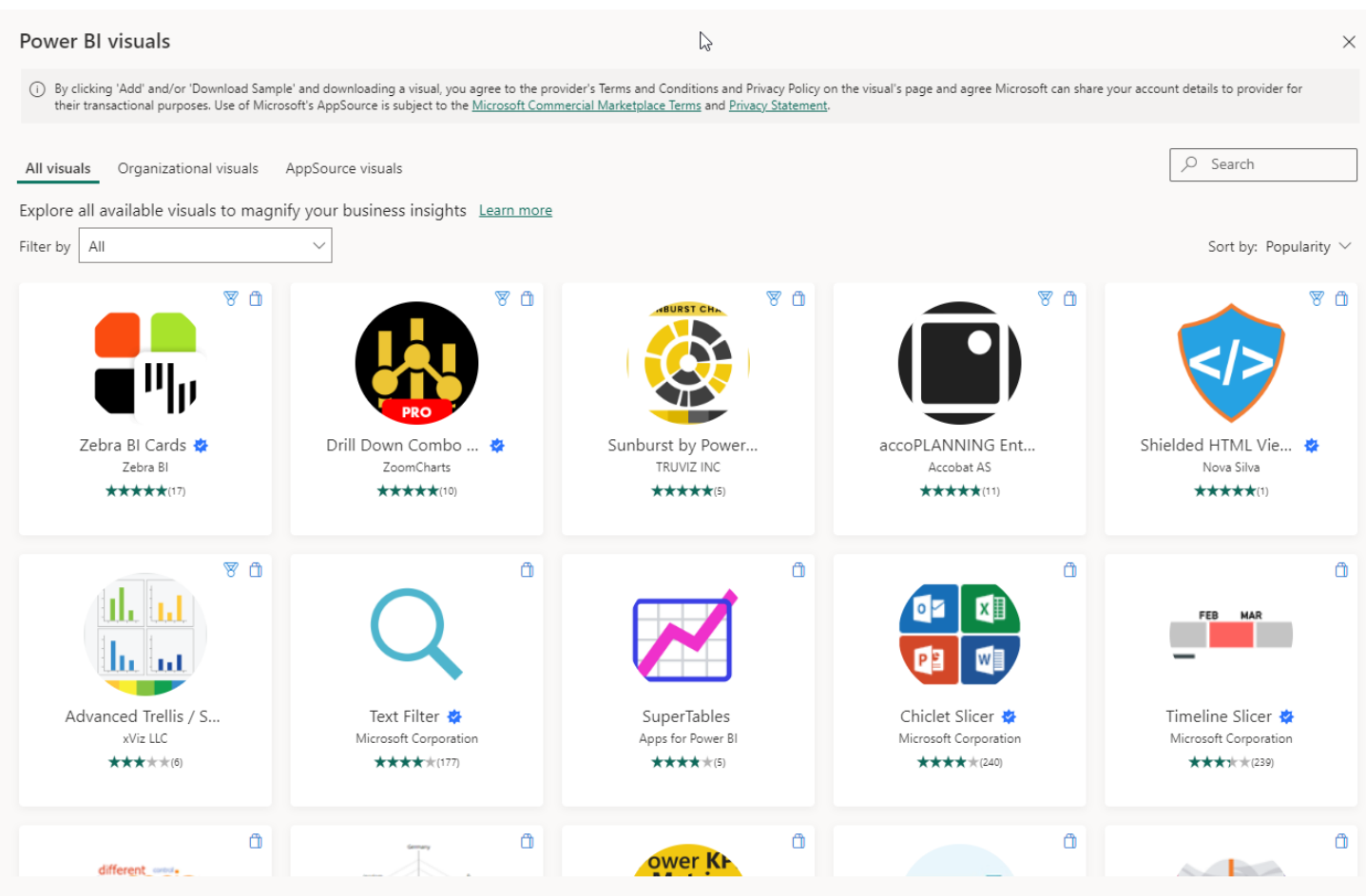
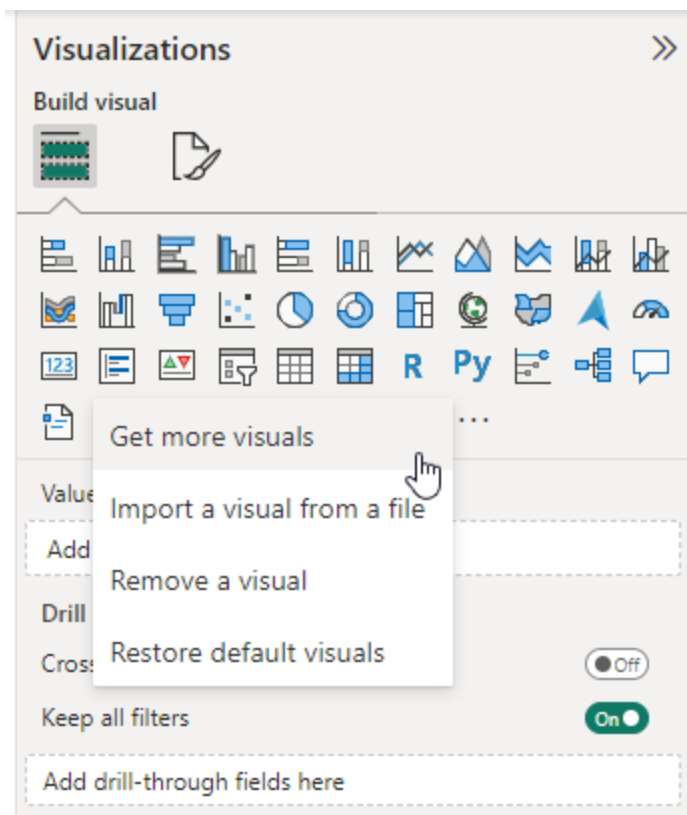
- Bar chart
- Column chart
- Line chart
- Are chart
- Pie chart
- Combo chart
- Bubble chart
- Scatter chart
- Donut chart
- Gauge chart
- Funnel chart
- Waterfall chart





# Visuals

## Examples of Custom Visuals



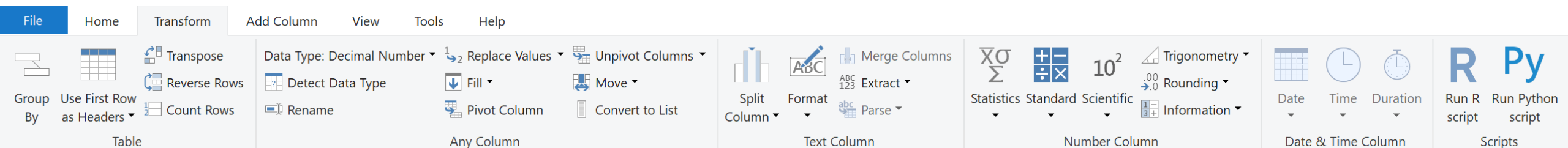
# Data Transformation

- Data Transformation Components
- Data Modeling

# Data Transformation

## Data Transformation Components

- Use first row as header
- Split the field or concatenate fields
- Replace values null with blanks
- Group data
- Pivot/unpivot columns
- Aggregate functions
- Format columns



# Data Transformation

## Data Modeling

- Import multiple tab from Excel or Create multiple queries
- Join the tables

The screenshot displays the Microsoft Power BI Data Modeler interface. Three tables are visible in the center:

- Resource Weekly Facts**: Contains columns like ACTUAL\_COST, ACTUAL\_HOURS, ACWP\_COST, ALLOC\_COST, ALLOC\_EAC\_COST\_VAR, ALLOC\_EAC\_HOURS\_VAR, ALLOC\_HOURS, AVAIL\_ALLOC\_HOURS\_PCT, and AVAIL\_ALLOC\_HOURS\_VAR.
- Resource Detail**: Contains columns like BOOKING\_MANAGER, BOOKING\_MANAGER\_KEY, CATEGORY, CLARITY\_CREATED\_DATE, CLARITY\_RESOURCE\_KEY, CLARITY\_UPDATED\_DATE, CLR\_EXPERIENCE, COMPANY\_KEY, and COMPANY\_NAME.
- Resource OBS**: Contains columns like CLARITY\_CREATED\_DATE, CLARITY\_OBS\_MAPPING\_KEY, CLARITY\_UPDATED\_DATE, DW\_UPDATED\_DATE, HIERARCHY\_LEVEL, OBS\_LEVEL1, OBS\_LEVEL1\_KEY, OBS\_LEVEL10, and OBS\_LEVEL10\_KEY.

Relationships are shown between the tables:

- A relationship between **Resource Weekly Facts** and **Resource Detail** with a cardinality of 1 to many (\*).
- A relationship between **Resource Detail** and **Resource OBS** with a cardinality of 1 to many (\*).

The **Properties** pane on the right shows the relationship between **Resource OBS** and **Resource Detail**:

- Relationship**: Expanded.
- Table**: Resource OBS, **Column**: RESOURCE\_KEY.
- Cardinality**: Many to one (\*:1).
- Table**: Resource Detail, **Column**: RESOURCE\_KEY.
- Make this relationship active**: Yes (checked).
- Cross-filter direction**: Single.
- Apply security filter in both directions**: No.
- Buttons**: Apply changes, Open relationship editor.



# Data Transformation - Advanced

- Creating your Own M Script
- M Script Examples

# Data Transformation - Advanced



Creating your own M script  
for your next advanced report

# M Script Examples





# Power BI Paginated Report



# Paginated Report

Power BI Paginated Report is designed to be printed or shared. You can create pixel-perfect reports with many pages of the same layout.

File Export 560 of 563 Parameters

Buying Group: Tailspin Toys Location: Absecon, NJ, Aceituna... View Report

Invoices From Date: 05/01/2016 Invoices To Date: 05/31/2016

**Buying Group Account Statement**  
 Invoice Range: May 01, 2016 to May 31, 2016  
 Buying Group: Tailspin Toys, 201 Customers Selected

Floor 20, Import Plaza  
 105 Silk Road  
 Tradesville  
 WA 99999

Wide World Importers

**Invoice No: 73507-70431**

Invoice 2 of 3

Invoice Date: May 31, 2016 Delivery Time:  
 Purchase Order No: 16826 Received By:  
 Billed To: Tailspin Toys (Head Office)  
 Delivery Information: Suite 150, 1959 Sarma Road

Item	Quantity	Unit Price	Tax	LineTotal
DBA joke mug - you might be a DBA if (White)	7	\$13.00	\$13.65	\$104.65
Ogre battery-powered slippers (Green) XL	8	\$32.00	\$38.40	\$294.40
Packing knife with metal insert blade (Yellow) 18mm	15	\$2.40	\$5.40	\$41.40
"The Gu" red shirt XML tag t-shirt (White) 3XS	48	\$18.00	\$129.60	\$993.60
<b>TOTAL</b>			<b>\$187.05</b>	<b>\$1,434.05</b>

# Use Cases

- ✓ Export project summary for each program
- ✓ Email list of Red projects of dynamic counts
- ✓ Integrate with Power BI Report with parameters
  - ✓ Insert Paginated Report in Power BI report for exporting
    - Power BI table export to csv and excel only
    - 150,00 rows limit
  - ✓ Add Power BI report hyperlink in Paginated Report for detail drill-thru
    - Pass in field as parameter

# Advanced Fabric Options

# Use Cases

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- ✓ SFTP
- ✓ Warehousing
- ✓ Datamart
- ✓ Copilot



# Questions?







# Master Clarity with Rego University

Earn Certifications in  
Administration, Leadership,  
and Technical Proficiency

Let Rego be your guide.



# Elevate Your Professional Expertise with Rego University Certifications

Rego is excited to introduce our **new certification programs**, designed to enhance your expertise in Clarity administration, leadership, and technical skills. These certifications provide hands-on experience and knowledge to excel in your career.



## Certification Requirements:

- ✓ **Completion:** 12 units per certification track
- ✓ **Eligibility:** Open to all Rego University attendees



## Important Reminder:

To have your certification **credits tracked**, ensure you **complete the class surveys in the app** after each session. This step is critical for certification progress.

# Surveys

Please take a few moments to fill out the class survey.  
Your feedback is extremely important for future events.





# Thank You for Attending Rego University

## Instructions for PMI credits

- Access your account at [pmi.org](https://pmi.org)
- Click on **Certifications**
- Click on **Maintain My Certification**
- Click on **Visit CCR's** button under the **Report PDU's**
- Click on **Report PDU's**
- Click on **Course or Training**
- Class Provider = **Rego Consulting**
- Class Name = **Rego University**
- Course **Description**
- Date Started = **Today's Date**
- Date Completed = **Today's Date**
- Hours Completed = **1 PDU per hour of class time**
- Training classes = **Technical**
- Click on **I agree** and **Submit**



Let us know how we can improve!  
Don't forget to fill out the class survey.



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